APPENDIX C TO PART 27—CRITERIA FOR CATEGORY A

C27.1 General.

A small multiengine rotorcraft may not be type certificated for Category A operation unless it meets the design installation and performance requirements contained in this appendix in addition to the requirements of this part.

C27.2 Applicable part 29 sections. The following sections of part 29 of this chapter must be met in addition to the requirements of this part:

29.45(a) and (b)(2)—General.
29.49(a)—Performance at minimum operating speed.
29.51—Takeoff data: General.
29.53—Takeoff: Category A.
29.55—Takeoff decision point: Category A.
29.59—Takeoff Path: Category A.
29.60—Elevated heliport takeoff path: Category A.
29.61—Takeoff distance: Category A.
29.62—Rejected takeoff: Category A.
29.64—Climb: General.
29.65(a)—Climb: AEO.
29.67(a)—Climb: OEI.
29.75—Landing: General.
29.77—Landing decision point: Category A.
29.79—Landing: Category A.
29.81—Landing distance (Ground level sites): Category A.
29.85—Balked landing: Category A.
29.87(a)—Height-velocity envelope.
29.547(a) and (b)—Main and tail rotor structure.
29.861(a)—Fire protection of structure, controls, and other parts.
29.901(c)—Powerplant: Installation.
29.903(b) (c) and (e)—Engines.
29.908(a)—Cooling fans.
29.917(b) and (c)(1)—Rotor drive system: Design.
29.927(c)(1)—Additional tests.
29.953(a)—Fuel system independence.
29.1027(a)—Transmission and gearboxes: General.
29.1045(a)(1), (b), (c), (d), and (f)—Climb cooling test procedures.
29.1047(a)—Takeoff cooling test procedures.
29.1181(a)—Designated fire zones: Regions included.
29.1187(e)—Drainage and ventilation of fire zones.
29.1189(c)—Shutoff means.
29.1191(a)(1)—Firewalls.
29.1193(e)—Cowling and engine compartment covering.
29.1195(a) and (d)—Fire extinguishing systems (one shot).
29.1197—Fire extinguishing agents.
29.1199—Extinguishing agent containers.
29.1201—Fire extinguishing system materials.
29.1305(a) (6) and (b)—Powerplant instruments.
29.1309(b)(2) (i) and (d)—Equipment, systems, and installations.
29.1323(c)(1)—Airspeed indicating system.
29.1331(b)—Instruments using a power supply.
29.1351(d)(2)—Electrical systems and equipment: General (operation without normal electrical power).
29.1587(a)—Performance information.

NOTE: In complying with the paragraphs listed in paragraph C27.2 above, relevant material in the AC ''Certification of Transport Category Rotorcraft'' should be used.

[Doc. No. 28008, 61 FR 21907, May 10, 1996]

APPENDIX D TO PART 27—HIRF ENVIRONMENTS AND EQUIPMENT HIRF TEST LEVELS

This appendix specifies the HIRF environments and equipment HIRF test levels for electrical and electronic systems under §27.1317. The field strength values for the HIRF environments and laboratory equipment HIRF test levels are expressed in root-mean-square units measured during the peak of the modulation cycle.

(a) HIRF environment I is specified in the following table:

TABLE I.—HIRF ENVIRONMENT I

Frequency	Field strength (volts/meter)	
	Peak	Average
10 kHz–2 MHz	50	50
2 MHz–30 MHz	100	100
30 MHz–100 MHz	50	50
100 MHz–400 MHz	100	100
400 MHz–700 MHz	700	50
700 MHz–1 GHz	700	100
1 GHz–2 GHz	2,000	200
2 GHz–6 GHz	3,000	200
6 GHz–8 GHz	1,000	200
8 GHz–12 GHz	3,000	300
12 GHz–18 GHz	2,000	200
18 GHz–40 GHz	600	200

In this table, the higher field strength applies at the frequency band edges.

(b) HIRF environment II is specified in the following table:

TABLE II.—HIRF ENVIRONMENT II

Frequency	Field strength (volts/meter)	
	Peak	Average
10 kHz–500 kHz	20	20
500 kHz–2 MHz	30	30
2 MHz–30 MHz	100	100
30 MHz–100 MHz	10	10
100 MHz–200 MHz	30	10
200 MHz–400 MHz	10	10
400 MHz–1 GHz	700	40
1 GHz–2 GHz	1,300	160
2 GHz–4 GHz	3,000	120
4 GHz–6 GHz	3,000	160
6 GHz–8 GHz	400	170